

they thought proper to positively forbid the admission of the skins as being contagious.

The Government of Friesland, animated with the laudable zeal of watching over the welfare of its people, forbade after the example of some other Provinces the use of tallow from the cattle which died of the distemper; but this only made them use it clandestinely; and experience taught that no inconvenience resulted from it. The Government of Friesland thought then, and with good reason, that they ought to permit (by a placard of 1745) the use of this tallow, in order to lighten more or less by this means the losses which the unfortunate inhabitants of this Province had sustained.

The same paternal care likewise induced these worthy magistrates to prohibit the use of the flesh of the animals which died of the contagious disease; but they eluded these wise measures; the peasants availed themselves of the eagerness of the needy citizens in order to derive from it a small profit, and they consumed quite a large quantity not only in these Provinces, but likewise in Germany, where they showed nevertheless a great dislike for the animals which died of the distemper, but there resulted from the use of it no disease among the people which might be attributed to the use of this pestiferous meat.

But I return to the best means of preserving the blood from corruption; you know already how mortal are the effects of this putrefaction. Nothing would be more desirable than to see doctors and persons who love useful experiments combine in order to find some remedy against this disease.

Experience shows us that Peruvian Bark is the best specific which one can employ for this purpose. Pringle, to the honor of the English doctors, has demonstrated this truth to us by many experiments, which I have myself repeated and have found perfectly correct. Flesh, says Pringle, may be preserved during an entire year in a decoction of Peruvian Bark.

matter from the eyes of a cow which had been cured of the contagion; but these matters produced no effect, either because they were too old, or because they no longer had virtue; these calves consequently did not become sick, and the trial made with the skins appear to be doubtful. I inoculated them again the 28th April, in the stable of our society at Groningen, upon the shoulder and behind the haunch, with matter taken the 14th of the same month from the nose of a cured cow, but also without result; doubtless because this matter was spoiled and mouldy, as it had been kept damp in a corked bottle. However, these calves afterwards took the disease from other inoculated cattle which were very sick in the same stable, so that one of them died the 16th May, which proves that they were susceptible to the contagion, and which they would without doubt have taken if it were true that the skins always surely communicate it. Nevertheless these trials do not prove anything and require to be repeated.

Some doubtless will object that Ramazzini and others have administered Peruvian Bark in the distemper without success. I admit that this remedy does not drive out the fever, and that it no longer produces effect when the disease has once broken out; and that because medicines no longer undergo coction in the stomach, and consequently being no longer absorbed, they do not pass into the blood.

Others have administered saltpetre, cream of tartar, camphor, and many other similar remedies, but as the stomach was without function they were all alike useless. In a word nothing operates on the animal attacked by the distemper, unless a little energy remains, and in this case the animal cures of itself.

In order to preserve some hope, we must begin in good time to prepare the humours, whilst the animals are still sound, and when the contagion menaces the country. But Peruvian bark is a remedy too dear, however, beneficial it may otherwise be; for this reason I have made trials with willow bark which has been recommended in England as a good specific against tertian fever, and this tree being very common in our country; besides, the horned cattle as by a natural instinct are very fond of eating its leaves and young shoots.

I have then, after the example of Pringle, made decoctions of the same quantity of Peruvian bark, of the bark of the ash and the bark of the white willow, in which I put the same day, (25th December, 1765) a piece of flesh from the same calf, of equal size and into vessels of the same capacity. I put also into a similar jar a piece of the same calf into very pure rain water. Then I exposed all these vessels upon a stone pipe of the stove of the warmest green house in the garden of the Academy, at the constant heat, day and night, of 62 to 68 degrees Fahrenheit. I found on the 30th December, that the piece of flesh placed in the decoction of ash bark was beginning to spoil. The decoction of willow bark had an agreeable smell, but was becoming turbid; and the flesh deposited in the rain water had already quite a bad smell. In a word, on the 27th January, 1769, the piece of veal put into the decoction of Peruvian bark had not undergone any alteration, no more than the decoction itself. That in the ash bark had the fetid odor of corrupt meat; that in willow bark began to have a bad smell; and the flesh put in the rain water was already entirely decomposed, and the water itself had regained its first clearness and had not the least smell.

The bark of the willow therefore resisted putrefaction during some weeks, a shorter time, however, than the Peruvian bark, and a little longer than the ash. In order to render this decoction of willow

bark more efficacious, I have mixed sulphuric acid with it. Many cows received daily of this decoction mixed with their ordinary drink, and drank it without the least repugnance. I have tasted the milk, cream, butter and cheese from these cows, in which I have found no bad taste; the milk food did not then experience any injury from this beverage. The farmers who had care of these cows assured me that they calved more easily and recovered more quickly after having brought forth. I cannot, however, assert what the success of this decoction will be until the contagion breaks out in the stables where cows are found which have been made to drink of it; and it is to be hoped that this may never take place.

Nevertheless, I do not pretend that we ought to confine ourselves to this remedy only; there are many others, such as salt, saltpetre, camphor, and among plants which grow here in abundance, camomile flowers, calamus, mint, &c.

I have already frequently observed how little we can hope from the remedies which we administer when the disease has broken out. We can then no longer expect any good effect either from Peruvian or willow bark, or from camomile flowers, or from camphor when the animal has ceased to ruminate. We ought then to have recourse to external remedies, that is to say, we must, in imitation of Pringle, apply blisters upon the back and near the shoulders, after shaving off the hair. We will be fully convinced of this if we compare the observations of this celebrated doctor upon the utility of this remedy in putrid and bilious fevers.

What shall I now say of the use of water, the curry-comb, the brush, in order to keep the animals clean? I do not think that they can be injurious; but have we not seen that the same enormous number of animals died in Holland and in Friesland, where they are well washed, curried and brushed, as in Gorecht and in the province of Drenthe, where the stables and the cows also are in a most dirty condition? And what deserves still more attention is that there escaped in proportion as many of these disgustingly dirty animals as of those which are admired in Holland and Friesland on account of the whiteness and glossiness of their coats. Why then burden the farmers with an increase of useless and expensive labor? Who would besides succeed in keeping clean, cows whose weakness renders them incapable of standing upright, and which soil themselves by continual diarrhoea? All this advice has generally been given by persons who consider the matter simply theoretically, and who would wish to see a stable as clean as their room. I do not, however, censure this care, but I think that it will be of little use.